MODIS TECHNICAL TEAM MEETING

April 1, 1999

Bob Murphy chaired the MODIS Technical Team Meeting. Present were Barbara Conboy, Wayne Esaias, Al Fleig, Bruce Guenther, Michael King, Ed Masuoka, Mike Roberto, George Serafino, and Eric Vermote, with David Herring and John Weier taking the minutes.

1.0 SCHEDULE OF EVENTS

Oceans Discipline Group Meeting (Miami, FL)	April 12–13
PI Processing Meeting (GSFC)	April 14 at 9:30 a.m. Building 28, Room E210
Calibration Discipline Meeting	May 3 at Greenbelt Marriott
Ocean Discipline Group Meeting	May 3 at Greenbelt Marriott
MODIS Science Team Meeting (Greenbelt, MD)	May 4–5 Greenbelt Marriott Hotel
Atmosphere Discipline Meeting	May 6 at Greenbelt Marriott
Land Discipline Meeting	May 6 at Greenbelt Marriott
PI Processing Meeting (GSFC)	May 12 at 9:30 a.m. Building 28, Room E210
SAFARI Validation/Coordination Meeting (Boulder, CO)	May 12–14
Mini-SWAMP Meeting at EOS-IWG (Vail, CO)	June 15–17
SAFARI Program Implementation Meeting (Gabarone, Botswana)	July 26–30

2.0 MINUTES OF THE MEETING

2.1 SDST Reports
Masuoka reported that Al Fleig and he attended the MODLAND-SDST Meeting on March 30-31. The meeting went well. Fleig commented that he is very impressed with David Roy's progress on the MODLAND QA Plan. He would like to see the other disciplines replicate Roy's QA efforts.

Masuoka told the team that MODAPS testing is now underway. SDST found an "interesting bug" in the Legato Networker COTS software—it does not always write all of the files in a subset to tape but reports that all files were correctly written to tape if any single file is saved successfully.   A software patch developed by Curt Tilmes solved this problem.   Otherwise, the MODAPS tests are proceeding and some minor issues are being worked.

Masuoka stated that PGE03 (Cloud Mask, Atmospheric Profiles and Volcano Alert) has gone through the STIG part of the SDST organization. Testing of PGE03 is on hold until the needed test granules in the new L1B format are created.

2.2 GDAAC Reports

Serafino handed out a list of weekly highlights and works in progress from the Goddard DAAC (Attachment 1). He said the MAPI patch was received from SDST and has been processed. The GDAAC has recommenced PGE01 testing.

A multi-DAAC-SDST discussion was held to address match up of ESDT and MCF used for production and archive. A configuration change request is being submitted to ECS for additional metadata attributes.

Serafino reported the weekly plan for the GDAAC is to take the delivery of ECS' 4PY patch that contains the PGE02 version 2.1.1 ESDTs, as well as to take the delivery of the new version of PGE03. Additionally, the GDAAC plans to continue with its integration of the new version of PGE01 and PGE02A. The GDAAC has PGEs 1-3 in operations currently for ORE and TESS preparation. Their target finish date is April 22.

Serafino said there are ongoing discussions with SDST on defining the Level 1 browse definition. This topic is being discussed at the biweekly MCST meetings. He added that OREs for nominal production and distribution of expedited MODIS and ASTER data commenced March 22.

Murphy observed that there is a lot of "Green" in the ECS System status chart. Serafino pointed out that the MAPI patch issue has been resolved. He noted, however, that the ESDT is not in sync because it doesn't conform to the baseline. Therefore, PGE02 version 2.1.1 is Code Red; i.e., progress on this item is stopped dead until a patch can be produced.

Masuoka told the team that the MODIS Ocean Group's ESDT problem was resolved to the satisfaction of Bob Evans and ECS. Masuoka said that while a solution has been agreed upon, work by the ECS contractor on implementing the solution in the ECS system hasn't been approved by the ESDIS Project. [Note: Mike Moore of the ESDIS Project told Masuoka on April 7 that the work has been approved and is underway].

Masuoka added that the Level 1A Ocean Subsetter, PGE 72, has completed coding and unit testing. It is slighly ahead of schedule. Esaias asked how this subsetter PGE differs from PGE02A under development at the GSFC DAAC. Masuoka responded that the PGE02A subsets specific bands for CERES from the Level 1B product. PGE 72 does subsetting and compression of Level 1A product and is different from the L1B subsetter both in the bands it subsets, the product it subsets them from and the fact that it compresses the product before sending it to Miami.

2.3 MODIS Instrument Reports

Roberto stated that the MODIS end-to-end test demonstrated that there is some question as to the amount of SRCA data obtained. He plans to request that the test be run at Valley Forge next week to collect those data. Guenther interjected that the ground station at Valley Forge is being taken apart today. Roberto said they could do the test at Vandenberg Air Force Base, if needed. [NOTE: Subsequent to this meeting, Roberto reported that the needed SRCA data from the MODIS end-to-end test was found. It was determined that minor changes to the software will be necessary. The current plan is to make the changes at Vandenberg.]

Roberto concluded that overall the end-to-end test was successful. They wanted some data for MODIS that they didn't get. Murphy asked Roberto to deliver a summary status report on the MODIS end-to-end test at next week's Technical Team Meeting. He also asked for a summary report on the end-to-end test from the GDAAC.

2.4 MCST Reports

Guenther reported that MCST had four problems during the MODIS end-to-end test. There was a low voltage problem in the 30-watt configuration of the power supply. There was also some difficulty in pointing the SDSM mirror; this had to do with latency commands. Guenther explained that each onboard calibration module is frozen in terms of where calibration data will be collected and where the scan mirror will point. Each time period the mirror points at a different calibration unit is called "sector rotation." During the end-to-end test, MCST found that there was a problem in getting that information on time. This problem will be addressed.

There was a problem in doing some microprocessor upload commands by hand. MCST will have to do those uploads about once per day when MODIS is on orbit. Guenther prefers that the uploads be done automatically. This is not a big problem.

Guenther announced that the MODIS pre-shipment review is next week. To prepare, MCST is working two issues: (1) data dropout problems and (2) bad resistors. Guenther said that it may simply be an artifact of the end-to-end test, but due to data dropout problems, MODIS could lose up to 30 scan lines per day. He personally feels that this is a non-issue and that it will be resolved. Regarding the second issue, he said there are about six bad resistors in MODIS' heater control unit. When they go out, MODIS will have to go from temperature control of ±10mK to about ±7mK. He said that if the decision is made to change these resistors, he estimates that this would cause the Terra launch date to slip 3 months. He feels this is unlikely to be agreed upon by senior management.

2.5 Land Group Reports

Vermote said that the MODLAND-SDST Meeting this week was very productive. There were several presentations on the MODLAND software production plan, validation, and QA prototyping. Everything was very satisfactory.

Vermote raised two issues: (1) the SIPS interface, and (2) the continual struggle with MODIS processing. Regarding the first issue, Vermote said ECS is considering the possibility of delivering the SIPS interface early as a patch to 4PY, and not waiting for Drop 5A. ECS is waiting for guidance from ESDIS on the issue. Murphy asked

Masuoka to follow-up on this subject and report on it at the next Technical Team Meeting.

For MODLAND PI processing, Vermote proferred that the Team needs more office space. Chris Justice met with Masuoka, Steve Wharton and Locke Stuart to discuss the space issue, but a solution hasn't been found yet. Vermote reminded the discipline leaders that MODLAND needs their support.

Murphy asked Vermote what he knows about continuous operations. Vermote replied that MODLAND has been doing sustained operations; the system has been up and down, but it is working. Masuoka added that SDST has been finding some problems, but in general the system is "solid." So far, continuous operations requires human operators. Problems are encountered when the system is allowed to run overnight. Murphy asked Masuoka to report on sustained operations and throughput next week.

2.6 Ocean Group Reports
Esaias announced that the next Ocean Group Meeting will be held in Miami on April 12-13. Dennis Clark will not be at the meeting because he will be in Hawaii on a cruise to refurbish the MOBY buoy.

The Ocean Group will hold a mini-discipline meeting on May 3, the day before the Science Team Meeting. The Atmosphere and Land Groups will have their group meetings on May 6.

Murphy asked if the Ocean Validation Plan has been updated. Esaias said the plan is forthcoming. King noted that no Ocean Group revised ATBDs have been delivered to the Project Science Office. The revised ATBDs are due April 30.

2.7 Atmosphere Group Reports
King announced that the Atmosphere Validation Plan has been submitted.

2.8 MAST Report
Conboy reported that invitations to the MODIS Science Team Meeting went out today. Responses are due back to Conboy on April 20. The meeting will be held at the Greenbelt Marriott. Murphy took an action item to begin developing the agenda for that meeting.

Murphy reminded the team that he distributed an e-mail containing Helen Woods' comments on the proposal for the release of MODIS data to NOAA's "bent pipe." He asked the discipline leaders to respond to his e-mail and give specific comments.

3.0 ACTION ITEMS

3.1 New Action Items
1. Discipline Group Leaders: review Murphy's e-mail regarding NOAA access to MODIS data and forward specific comments to Murphy by April 8.
2. Murphy: begin developing the MODIS Science Team Meeting Agenda; present a strawman at the April 8 Technical Team Meeting.
3. Masuoka: report on the sustained ops and throughput issues at the April 8 Tech Team Meeting.

4. Masuoka: follow up on the issue of ECS's possible early delivery of the SIPS interface and report at the April 8 Tech Team Meeting.
5. Roberto and GDAAC: provide a summary report of the MODIS end-to-end test for presentation at the April 8 Tech Team Meeting.

3.2 Action Items Carried Forward

1. Barnes: Work with Wayne Esaias to complete the written and viewgraph versions of the Oceans Validation Plan.

2. Murphy: Create a mechanism for coordinating MODIS operations and other schedules that includes an interactive listing. It should be more than a passive posting of schedules on the World Wide Web. Such an interactive schedule could be used by MODIS science discipline teams to coordinate field campaigns or by the operations group to coordinate MODIS activities with the other Terra instruments' activities.

Status: This item remains open.

3. Murphy: Clarify the data release agreements between NASA and NOAA on MODIS data, including MODIS requirements and which of these requirements NOAA will accommodate. Discuss these items with Legg and Tarpley of NOAA.

Status: This item remains open. Draft MOU is being worked by Murphy, Tarpley, Legg, and Masuoka.

4. Conboy and Howard: Plan for the next MODIS Science Team meeting in May.

Status: This item remains open.

5. Heney and Howard: Develop a weekly MODIS news page linked to the MODIS home Web site. It should include hot items and reflect weekly progress.

Status: This item remains open.

6. Murphy: Follow up on the status of the PI Processing working agreement with ESDIS.

Status: This item remains open. The conveyance memo from SDDT's and Discipline leaders will be signed this week (the week of March 8–12).

7. Murphy: Investigate the status of direct broadcast and present an update to the Technical Team.

Status: This item remains open.

8. Murphy: Coordinate a MODIS approach for radiance-to-brightness temperature conversions.

Status: This action remains open.

9. Masuoka: Submit an EOS-PM Data Product Update to ESDIS.

Status: This action item remains open.

10. Masuoka: Examine status of DAO ancillary products for MODIS.

Status: This item remains open.

3.2 Closed Action Items

1. Evans and Eicorn: Look into what can be done at Valley Forge without taking the instrument off the spacecraft.

Status: This item is closed. No feasible solution was found.

2. Conboy: Work with Murphy on a launch invitation list; invite PAO to participate.

Status: This item is closed. Conboy submitted the MODIS Terra Launch Invitation.

3. Guenther: Deliver a schedule for an earlier date on Level 1 code. In addition work on, if possible, a more modularized version of the Level 1B code to minimize any problems from forthcoming software changes.

Status: This item is closed. Guenther provided this schedule to an early January premeeting to the SDDT meeting held on January 13.